



Billing Code: 4150-31

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Findings of Research Misconduct

AGENCY: Office of the Secretary, HHS.

ACTION: Notice.

SUMMARY: Notice is hereby given that the Office of Research Integrity (ORI) has taken final action in the following case:

Bijan Ahvazi, Ph.D., National Institutes of Health: Based on the report of an investigation conducted by the National Institutes of Health (NIH) and additional analysis by ORI in its oversight review, ORI found that Dr. Bijan Ahvazi, former Director of the Laboratory of X-ray Crystallography, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), NIH, engaged in research misconduct in research supported by the Intramural Program at NIAMS, NIH.

ORI found that Respondent engaged in research misconduct by falsifying data related to or in the following published papers:

1. Ahvazi, B., Boeshans, K.M., Idler, W., Baxa, U., & Steinert, P.M. "Structural basis for the coordinated regulation of transglutaminase 3 by guanine nucleotides and calcium/magnesium." *J. Biol. Chem.* 279(8):7180-92, 2004 Feb 20 (withdrawn) (hereinafter "*JBC* 2004a")
2. Ahvazi, B., Boeshans, K.M., & Steinert, P.M. "Crystal structure of transglutaminase 3 in complex with BMP: Structural basis for nucleotide specificity." *J. Biol. Chem.* 279:26716-25, 2004 (withdrawn) (hereinafter "*JBC* 2004b")
3. Ahvazi, B., Boeshans, K.M., Idler, W., & Cooper, A.J.L. "Crystal structure of transglutaminase 3-cystamine complex: Binding of two cystamines to the nucleotide-binding pocket. M6:06060, Submitted to *J. Biol. Chem.*, 2006 (rejected) (hereinafter "*JBC* 2006").

Specifically, ORI finds that Respondent:

1. falsely labeled Figure 3A in *JBC* 2004b representing an isothermal calorimetric titration (ITC) experiment using guanine monophosphate (GMP) and transglutaminase 3 (TGase 3) when the figure was actually a relabeled version of an unrelated experiment that Respondent previously published as Figure 1A in *JBC* 2004a.

2. falsified Figure 4B, Figure 4C, and Figure 6D in *JBC* 2004b and Figure 5E in *JBC* 2006, by altering the original data in the following ways to represent the desired experiment:
 - a. falsified Figure 4B in *JBC* 2004b, by adding multiple data points to titration curves for four different concentrations of TGase 3 bound by different concentrations of tagged GTP γ S and deleting two (2) outlying data points from one of the curves
 - b. falsified Figure 4C in *JBC* 2004 b, representing a competition assay for the release of tagged GTP γ S bound to TGase 3, by (1) falsely claiming that the release of the tagged nucleotide occurred with the addition of untagged GMP, when the result was from an assay using untagged GDP, (2) adding additional data points onto the titration curves, and (3) altering the scale of the abscissa
 - c. falsified Figure 6D in *JBC* 2004b, by using the false Figure 4B to also represent an additional competition experiment using unmodified nucleotide analog compounds and ATP; specifically, Respondent (1) falsified the units and labels of the axes, (2) falsified the labels of the curves, and (3) vertically inverted the curves

- d. falsified Figure 5E in the *JBC* 2006 manuscript, representing a competition experiment for the release of tagged GTP γ S bound to TGase 3 with the addition of cystamine, when the actual experiment was a competition experiment with the addition of untagged nucleotides.

Dr. Ahvazi has entered into a Voluntary Settlement Agreement (Agreement) and has voluntarily agreed for a period of two (2) years, beginning on October 7, 2014:

- (1) to have his U.S. Public Health Service (PHS) research supervised and to notify any employer(s)/institution(s) at which he may participate in PHS funded projects of the terms of his supervision; Respondent agrees that prior to the submission of an application for PHS support for a research project on which the Respondent's participation is proposed and prior to Respondent's participation in any capacity on PHS-supported research, Respondent shall ensure that a plan for supervision of Respondent's duties is submitted to ORI for approval; the supervision plan must be designed to ensure the scientific integrity of Respondent's research; Respondent agrees that he shall not participate in any PHS-supported research until such a supervision plan is submitted to and approved by ORI; Respondent agrees to maintain responsibility for compliance with the agreed upon supervision plan;

- (2) that any institution employing him to work on PHS-supported projects shall submit, in conjunction with each application for PHS funds, or report, manuscript, or abstract involving PHS-supported research in which Respondent is involved, a certification to ORI that the data provided by Respondent are based on actual experiments or are otherwise legitimately derived and that the data, procedures, and methodology are accurately reported in the application, report, manuscript, or abstract; and
- (3) to exclude himself voluntarily from serving in any advisory capacity to PHS including, but not limited to, service on any PHS advisory committee, board, and/or peer review committee, or as a consultant.

FOR FURTHER INFORMATION CONTACT:

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